### Contents

#### List of Contributors xi

 Introduction—Wildlife Conservation and Management in South and Central America: Multiple Pressures and Innovative Solutions 1 José M. V. Fragoso, Richard E. Bodmer, and Kirsten M. Silvius

## Part I. Local Peoples and Community Management

- 2. Conceptual Basis for the Selection of Wildlife Management Strategies by the Embera People in Utría National Park, Chocó, Colombia 11

  Astrid Ulloa, Heidi Rubio-Torgler, and Claudia Campos-Rozo

  TRANSLATED FROM THE SPANISH BY K. SILVIUS
- Bridging the Gap Between Western Scientific and Traditional Indigenous Wildlife Management: The Xavante of Rio Das Mortes Indigenous Reserve, Mato Grosso, Brazil 37

Kirsten M. Silvius

4. Increasing Local Stakeholder Participation in Wildlife Management Projects with Rural Communities: Lessons from Bolivia 50

Wendy R. Townsend

#### TRANSLATED FROM THE SPANISH BY K. SILVIUS

5. Community-Based Wildlife Management in the Gran Chaco, Bolivia 59

Andrew J. Noss and Michael D. Painter

 Fisheries in the Amazon Várzea: Historical Trends, Current Status, and Factors Affecting Sustainability 76

William G. R. Crampton, Leandro Castello, and João Paulo Viana

- Fisheries Management in the Mamirauá Sustainable Development Reserve 99
   William G. R. Crampton, João Paulo Viana, Leandro Castello,
   and José María B. Damasceno
- 8. Hunting Effort as a Tool for Community-Based Wildlife Management in Amazonia 123

Pablo E. Puertas and Richard E. Bodmer

#### Part II. Economic Considerations

 Economic Incentives for Sustainable Community Management of Fishery Resources in the Mamirauá Sustainable Development Reserve, Amazonas, Brazil 139

> João Paulo Viana, José Maria B. Damasceno, Leandro Castello, and William G. R. Crampton

Community Ownership and Live Shearing of Vicuñas in Peru: Evaluating Management Strategies and Their Sustainability 155

Catherine T. Sahley, Jorge Torres Vargas, and Jesús Sánchez Valdivia

11. Captive Breeding Programs as an Alternative for Wildlife Conservation in Brazil 171

Sérgio Luiz Gama Nogueira-Filho and Selene Siqueira da Cunha Nogueira

12. Economic Analysis of Wildlife Use in the Peruvian Amazon 191 Richard E. Bodmer, Etersit Pezo Lozano, and Tula G. Fang

## Part III. Fragmentation and Other Nonharvest Human Impacts

13. Mammalian Densities and Species Extinctions in Atlantic Forest Fragments: The Need for Population Management 211

> Laury Cullen, Jr., Richard E. Bodmer, Claudio Valladares-Padua, and Jonathan D. Ballou

14. Abundance, Spatial Distribution, and Human Pressure on Orinoco Crocodiles (Crocodylus intermedius) in the Cojedes River System, Venezuela 227

Andrés E. Seijas

#### Contents [ix]

15. Impacts of Damming on Primate Community Structure in the Amazon: A Case Study of the Samuel Dam, Rondônia, Brazil 240

Rosa M. Lemos de Sá

 Niche Partitioning Among Gray Brocket Deer, Pampas Deer, and Cattle in the Pantanal of Brazil 257

Laurenz Pinder

17. Ecology and Conservation of the Jaguar (*Panthera onca*) in Iguaçu National Park, Brazil 271

Peter G. Crawshaw, Jr., Jan K. Mähler, Cibele Indrusiak, Sandra M. C. Cavalcanti, Maria Renata P. Leite-Pitman, and Kirsten M. Silvius

A Long-Term Study of White-Lipped Peccary (*Tayassu pecari*) Population Fluctuations in Northern Amazonia: Anthropogenic vs. "Natural" Causes 286
 José M. V. Fragoso

# Part IV. Hunting Impacts—Biological Basis and Rationale for Sustainability

- 19. Evaluating the Sustainability of Hunting in the Neotropics 299 Richard E. Bodmer and John G. Robinson
- 20. Hunting Sustainability of Ungulate Populations in the Lacandon Forest, Mexico 324

Eduardo J. Naranjo, Jorge E. Bolaños, Michelle M. Guerra, and Richard E. Bodmer

- 21. Human Use and Conservation of Economically Important Birds in Seasonally Flooded Forests of the Northeastern Peruvian Amazon 344

  José A. González
- 22. Patterns of Use and Hunting of Turtles in the Mamirauá Sustainable Development Reserve, Amazonas, Brazil 362

Augusto Fachín-Terán, Richard C. Vogt, and John B. Thorbjarnarson TRANSLATED FROM THE PORTUGUESE BY K. SILVIUS

 Fisheries, Fishing Effort, and Fish Consumption in the Pacaya-Samiria National Reserve and Its Area of Influence 378

Salvador Tello

TRANSLATED FROM THE SPANISH BY K. SILVIUS

24. Implications of the Spatial Structure of Game Populations for the Sustainability of Hunting in the Neotropics 390

Andrés J. Novaro

25. Hunting and Wildlife Management in French Guiana: Current Aspects and Future Prospects 400

Cécile Richard-Hansen and Eric Hansen

Bibliography 411

Index 447